
The Loan Arranger

Fall 2004

Revolving Loan and Operator Certification Section
Environmental Science and Services Division
Michigan Department of Environmental Quality **DEQ**

Dearborn Delivers by Janet Monroe

The city of Dearborn, home to the renowned Greenfield Village and Henry Ford Museum, as well as the World Headquarters for Ford Motor Company, will soon be home to a major construction project to address the city's combined sewer overflows.

The first of three phases of construction is expected to commence in October of this year, with the second phase to commence this time next year, and a third phase in 2 to 3 years. The total project is expected to cost over \$250 million, and address three major outfalls in the first phase, two in the second, and 12 in the last phase.

The process of choosing a method to address the discharge of untreated combined sewage involved an immensely detailed and time-consuming analysis of alternatives by the city. Numerous alternatives and variations on these alternatives were studied, including, but not limited to, traditional underground storage basins, tunnels constructed in rock, tunnels constructed in soft ground, and a joint tunnel constructed with the city of Detroit. Various combinations of large or small shafts associated with tunnels were also evaluated. In the end, a cost effective solution was chosen utilizing a flow through tunnel concept for 12 outfalls along the Lower Rouge, and



individual capture and treatment facilities at the five other outfalls to be addressed.

The first phase, also known as Phase A of West Dearborn, will address three outfalls on the Main Branch of the Rouge, utilizing a somewhat innovative design for the capture and treatment of combined sewage during wet weather events. At two of the three outfalls, shafts will be constructed using the sinking caisson method of construction. These 125 to 150 foot diameter concrete shafts, approximately 100 feet deep, will have a capacity of 7.2 million gallons and 10.1 million gallons, respectively. Any volume exceeding this capacity will be disinfected and screened prior to discharge. At the third overflow location, two previously constructed shafts will be modified and utilized for combined flow capture, and then dewatered to the Greenfield pump station. No discharge is expected at this outfall once the construction is complete due to the combined capacity provided by the shafts and the large sewer conveying flows to the shafts. These facilities will meet the DEQ's presumptive criteria, meaning that they will fully capture the flows resulting from a one year-one-hour storm, and retain for 30 minutes the flows resulting from a 10 year-one-hour storm.

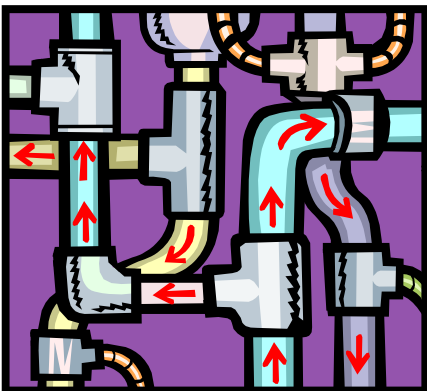
Another somewhat innovative concept will involve the construction of an offsite disinfection facility, which will inject disinfectant into the sewers leading to the new shafts. This permits adequate disinfection time without construction of additional and costly storage capacity.

One of the outfalls to be addressed in this first phase is located at the most northeastern corner of the Greenfield Village site. The construction of this shaft is not expected to conflict with

Greenfield Village activities or visitation. However, the new sewer and abandonment of an existing sewer, accompanied by restoration of disturbed areas, will be scheduled to minimize possible disruption. The Greenfield Village itself will remain undisturbed.

In the second phase, two additional shafts will be constructed to address what are termed the East Dearborn outfalls, discharging into the Main Branch of the Rouge. The sinking caisson method of construction utilized for these shafts, as well as the two shafts constructed in the first phase, intends to minimize the construction of large and deep excavations that, in this area, historically have been affected by heavy groundwater flows and hydrogen sulfide escaping during open cut construction. The caissons will sink into the ground by their own weight as soil from the center of the shaft is excavated and successive layers of concrete are added to build up the sidewalls of the shafts. This method of construction was utilized in several combined sewage overflow control facilities constructed in nearby cities using federally supplied Rouge River National Wet Weather Demonstration Project grant funds.

In the third phase of this project, commonly known as Phase B of the West Dearborn project, the city is planning to construct a tunnel connecting the remaining 12 outfalls and storing the combined sewage for dewatering to the Detroit system. Several riser shafts will be constructed and fitted with screens and disinfection facilities for treating any overflows that exceed the capacity of the tunnel.



The project will be funded in part by a remaining federal wet weather demonstration grant administered by Wayne County and its Rouge Program Office, in addition to low interest loans from the Clean Water Revolving Fund (CWRP). The mechanism to be used by the city to cover the required local match to the grant, and the repayment of the CWRP loan, was put to a vote in

August. The city facilitated voter involvement by creating a calculator on its website to help voters determine whether financing the project by millage or user fees was optimal for their situation. Voters ultimately chose the millage method of financing.

The city of Dearborn is to be commended for engaging in the highly complex analysis of alternatives, keeping its voters informed on the project, and seeking citizen input. This large-scale construction project will play a significant role in the clean up of portions of the Lower Branch and Main Branch of the Rouge River.

Programs Adapt to Meet Additional Needs

by Wendy Jansma



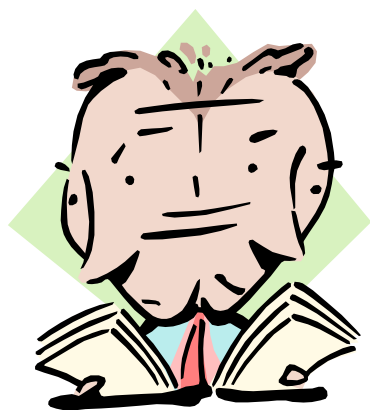
In recent months, program staff have taken a careful look at the administration of our low interest loan programs to determine what changes could be made to improve our response to

the needs of program applicants. Resulting from this effort, the following changes will go into effect on October 1, 2004. Each is anticipated to benefit applicants.

1. The eligibility of collector sewer replacement in the State Revolving Fund (SRF) program has been expanded to include those sewers that have poor structural integrity. Prior to this change, collector sewer rehabilitation/replacement were eligible only if infiltration/inflow could cost-effectively be eliminated. Sewer inspections (televising, physical inspections) will be required to substantiate structural problems. Additionally, rehabilitation methods must be cost-effective, considering the various methods of repair and replacement.
2. The policy covering the decommissioning of existing facilities has been relaxed for both the SRF and the Drinking Water Revolving Fund (DWRP) programs. Cost-effective demolition and/or decommissioning of existing opera-

tional or abandoned wastewater/drinking water facilities is now eligible in conjunction with new construction at a treatment works site. Prior to this change, eligible demolition of facilities was restricted to work directly necessary to accomplish project construction (i.e. in the footprint) and decommissioning was restricted to facilities in operation at the time the final project plan was submitted.

3. The contingency for loans will be increased from the current four percent to six percent. This change will apply to the SRF, DWRP, and the Strategic Water Quality Initiatives Fund (SWQIF).
4. A change has been proposed to eliminate an inconsistency between the DWRP and the SRF/SWQIF programs with respect to the eligibility of project planning. Costs incurred to complete project planning are currently only eligible in the DWRP program. An amendment to Part 53, Clean Water Assistance, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, has been drafted to make SRF/SWQIF project planning costs eligible as well. In addition to project plan preparation, other planning-related activities which would become eligible upon enactment of this amendment include surveys for biological/ archeological/ wetlands resources, sanitary surveys, hydrogeological studies, inflow/infiltration analyses and sewer system evaluation surveys. The DEQ legislative liaison is in the process of securing a sponsor to introduce the amendment, and we are hopeful the amendment will be enacted in time for Fiscal Year (FY) 2005 first quarter loans.



continue to look for other improvements that will make the programs more useful to applicants.

Considering the difficult financial situations that communities are increasingly being challenged by, we hope that these changes will further assist in the funding of water and sewer infrastructure needs. Staff will

Proposal 2 Update by Chip Heckathorn

In the Spring/ Summer 2003 edition of the *Loan Arranger* we provided an update of the Great Lakes Water Quality Bond Proposal, an initiative that appeared on the November 2002 ballot as Proposal 2. Of the four statewide proposals on



the ballot, Proposal 2 was the only one that passed, capturing over 60 percent of the vote. The Proposal authorized the state of Michigan to sell up to \$1 billion in general obligation bonds over not less than ten years (now five) to finance water quality improvement projects. Ninety percent of the bond proceeds are to be deposited into the SRF, while the remaining ten percent will capitalize the new Strategic Water Quality Initiatives Fund (SWQIF). This new fund can finance two specific kinds of projects that are not SRF eligible: projects for the onsite replacement/upgrade of failing septic systems, and those that accomplish the removal of groundwater or storm water from sanitary or combined sewer leads. The SRF is limited to publicly owned improvements, while the SWQIF is designed to be used for improvements to facilities that will remain in private ownership.

The question we are most frequently being asked is: "What is going on with Proposal 2?" Well, here goes:

- (1) The first series (\$100 million) of Great Lakes Water Quality Bonds were issued in December of 2003. Discussions are now underway about issuing another \$200 million in December of this year. In total these bonds would provide an additional \$270 million in capitalization for the SRF and \$30 million for the SWQIF.
- (2) An internal workgroup has completed efforts to create all the necessary forms and guidance documents for the SWQIF. The documents are on our website at: <http://www.michigan.gov/deq/>.
- (3) The first SWQIF loans were tendered in March of this year. The city of Ann Arbor re-

ceived \$875,000, while Clinton Township in Macomb County received \$270,000. Both communities are using these funds to implement footing drain disconnection projects to prevent sanitary sewer overflows and basement backups.

- (4) Outreach efforts are ongoing to get the word out about the details of Proposal 2. Most importantly, we are trying to ensure that potential applicants are fully aware of the financing possibilities available in both the SRF and SWQIF.

What are the most important things to remember about Proposal 2? First, bond proceeds from Proposal 2 have dramatically increased the capabilities of the current SRF program. The additional capitalization not only substantially increases the annual lending capacity of the program, but will also allow us to maximize assistance through even more competitive interest rates. Second, any public entity considering a water pollution control project should contact our office to arrange a pre-planning meeting. This meeting will allow DEQ staff to meet with local decision makers, explain the SRF/SWQIF programs, and help ensure that an informed decision is made about financing options. Lastly, the SWQIF planning, application, and loan award processes do mirror those that have existed in the SRF since its inception. The same project planning requirements, program timelines, and annual funding cycles exist in the SWQIF.

Simply put, you will not know if these programs can assist your community in meeting its water quality needs unless you ask. One simple inquiry could save your community a lot of money ... and it won't cost you anything to find out.

**Deadlines for Submission of
Project Plans for the Fiscal Year 2006
Project Priority Lists**

Drinking Water Revolving Fund – Project Plans must be received in our office by close of business on April 29, 2005 OR postmarked no later than May 1, 2005.

State Revolving Fund/Strategic Water Quality Initiatives Fund– Project Plans must be received OR postmarked no later than July 1, 2005.

**DEQ Announces Loan Commitments
through SRF and DWRP**



The DEQ announced five new loan commitments today from the SRF and two new commitments from the DWRP. The loans are tendered through the Michigan Municipal Bond Authority. These seven loans total nearly \$112 million.

The funded SRF projects include:

- \$9,545,000 to the city of Eaton Rapids for the upgrade of its wastewater treatment plant. The project also includes the rehabilitation of tributary sanitary sewers to remove excessive inflow and infiltration.
- \$4,130,000 to the city of Trenton for the rehabilitation of sewers and pump stations. This loan represents the sixth and last segment of a long-term project that will eliminate sanitary sewer overflows within the city. The six loans total over \$46 million.
- A loan of \$6,465,000 to the city of Warren, which is the third in a series of loans, to finance improvements to the city's wastewater treatment plant.
- \$9,545,000 in financing to the city of Boyne City for the upgrade and expansion of its wastewater treatment plant. The project will include the abandonment of treatment process components currently located on the shore of Lake Charlevoix.
- A \$61,640,000 loan to the city of Dearborn for implementation of its Long Term Combined Sewer Overflow Control Program. Combined with funding from the Rouge River Wet Weather Demonstration Project, this project represents the second in a series of projects to construct retention/treatment facilities to prevent the discharge of untreated combined sewage to the Rouge River.

These commitments bring total SRF financing awarded to Michigan communities to over \$2 billion. These projects are strong examples of the commitments being made by local units of government in Michigan to ensure protection of

the state's valuable water resources and the public health of its citizens.

The funded DWRP projects include:

- \$11,000,000 in loan assistance to Independence Township in Macomb County. The project will involve the construction of new supply wells and additional treatment facilities, as well as the replacement of deteriorating water mains, all intended to provide necessary reliability to the system.
- A \$6,330,000 loan to the city of Armada to construct a new water treatment facility, a new well and to replace deteriorated portions of its water distribution system.

The improvements financed by these loans will ensure compliance with the requirements of the Safe Drinking Water Act and protect the public health of system users in these communities. Since the inception of Michigan's DWRP program in 1998, over \$330 million in assistance has been tendered.

DEQ Director Steven Chester noted that revolving fund programs continue to represent the primary source of financial assistance available to local governments and underscored the fact, that along with the SWQIF, the SRF and DWRP continue to be the most effective means of providing assistance for critical water and wastewater infrastructure needs.

"As the wastewater and drinking water infrastructures in Michigan continue to age, the demand for assistance like that provided by the revolving fund programs will continue to grow," said Director Chester. "Federal and state revolving fund mechanisms deliver more infrastructure construction per investment dollar. In addition, they ease the financial burden of necessary system improvements through below market interest rates. By utilizing revolving funds we also ensure that continued funding capabilities exist for future years, even in the face of the mounting budget pressures that Michigan faces."

Interest Rates Set for Fiscal Year 2005

Director Steven Chester has set the interest rates for the three revolving loan funds, the SRF, the DWRP, and the SWQIF, for Fiscal Year 2005. These rates are effective through September 2005.

Loan Program	Interest Rate
SRF	1.625%
SWQIF	1.625%
DWRP	2.125%

These rates were set based upon the demand for financing in the coming year, anticipated future demand for financing, consideration of market interest rates available to borrowers, and evaluation of additional costs to borrowers for program participation in each fund. They were generated using the Interest Rate Methodology established in June 2003.

These rates will be incorporated into the State's Intended Use Plans for submission of capitalization grant applications, in accordance with the 1987 amendments to the federal Clean Water Act, and the 1996 amendments to the federal Safe Drinking Water Act.

Thoughtful planning now may enable a community to be ready to apply for DWRP, SWQIF, and/or SRF assistance in FY06 and beyond. Contact the Revolving Loan and Operator Certification Section (addresses on back page) for more information on community participation in the loan programs.



If you know someone, who would like to be added to *The Loan Arranger* mailing list, or have an address change, please e-mail the editor, Ms. Deana M. Bishop, at bishopd@michigan.gov

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